

R code for Data Science for Beginners

Day 1: Individual Exercise

AUTHOR

Howard Liu

PUBLISHED

September 9, 2024

Task 1. Modify the author name above to your name

Task 2. Perform the following calculations by writing R commands

```
# 2-1: Multiply 4 by 30 plus 6, and then raise the answer to the power of 0.5  
(4 * (30 + 6)) ^ 0.5 # a sample answer is here
```

```
[1] 12
```

```
# WRITE YOUR ANSWER HERE, in R code chunks
```

2-2: Multiply 4 by 30, then add 6 and then raise the answer to the power of 0.5

WRITE YOUR ANSWER HERE

Note that 2-1 and 2-2 should give you DIFFERENT answers, because these are different operations.

Task 3. Working with objects

3-1: Create an object called "X1" which is the number 73

WRITE YOUR ANSWER (code) HERE

3-2: Create another object called "X2" which is the answer to the sum 99 + 38

WRITE YOUR ANSWER (code) HERE

3-3: Multiply X1 and X2 together and store the answer as another object called "X3"

WRITE YOUR ANSWER (code) HERE

3-4: Subtract 1 from X3, and then raise the answer to the power of 0.25

WRITE YOUR ANSWER (code) HERE

Note: the answer should be 10.

Task 4. Calculation using objects

Redo the calculation in 2-1 (Multiply 4 by 30 plus 6, and then raise the answer to the power of 0.5), but this time do so by creating objects. Take the following steps:

4-1: Create an object called part.1 that is equal to "30 plus 6"

WRITE YOUR ANSWER (code) HERE

4-2: Create an object called part.2 that is equal to 4 times part.1

WRITE YOUR ANSWER (code) HERE

4-3: Raise part.2 to the power of 0.5

WRITE YOUR ANSWER (code) HERE

The numerical answer you get here should be the same as your answer for 2.1

Task 5. Detecting R data types

5-1 Create a character vector and show that it is character. It'd be nice if you can do it in one line of code

WRITE YOUR ANSWER (code) HERE

5-2 Create a numeric vector and coerce it to a factor vector. It'd be nice if you can do it in one line of code

WRITE YOUR ANSWER (code) HERE

Task 6. Testing NA

6-1 Create a numeric vector with NA

WRITE YOUR ANSWER (code) HERE

6-2 Show me where the NA is located in the vector (using the which() function)

WRITE YOUR ANSWER (code) HERE

6-1 Create a numeric vector with NaN

WRITE YOUR ANSWER (code) HERE

6-2 Show me where the NaN is located in the vector (using the which() function)

WRITE YOUR ANSWER (code) HERE

Finally, execute the entire file. Make sure that you don't get any error messages, such as **"Error: unexpected symbol in ..."** shown in Red. If you receive an error message, it's probably because you forgot to comment out some lines. Comment them out so you won't get any error message.